



#7

SEQUENCE LISTING

<110> Glass, David

Bodine, Sue

<120> NOVEL NUCLEIC ACID AND POLYPEPTIDE MOLECULES

<130> REG 753B

<140> 10/061,043

<141> 2002-01-30

<150> 60/338,742

<151> 2001-10-22

<150> 60/311,697

<151> 2001-08-10

<150> 60/264,926

<151> 2001-01-30

<160> 48

<170> PatentIn version 3.0

<210> 1

<211> 29

<212> DNA

<213> mouse

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<210> 2

<211> 24

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<213> mouse

<400> 2  
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<210> 3

<211> 17

<212> PRT

<213> rat

<400> 3

Asp Glu Glu Glu Glu Phe Thr Glu Glu Glu Glu Glu Asp Gln Glu  
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Glu

<210> 4

<211> 29

<212> DNA

<213> mouse

<400> 4  
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<210> 5

<211> 24

<212> DNA

<213> mouse

<400> 5  
cccgaaatgg cagtatttct gcag

24

<210> 6

<211> 39

<212> PRT

<213> Homo sapiens

<400> 6

Leu Pro Leu Cys Leu Gln Leu Asn Leu Met Gln Arg Leu Ser Asp Gly  
1 5 10 15

Arg Asp Leu Val Ser Leu Gly Gln Ala Ala Pro Asp Leu His Val Leu  
20 25 30

Ser Glu Asp Arg Leu Leu Trp  
35

<210> 7

<211> 39

<212> PRT

<213> Homo sapiens

<400> 7

Leu Pro Glu Asp Val Leu Phe His Ile Leu Lys Trp Leu Ser Val Glu  
1 5 10 15

Asp Ile Leu Ala Val Arg Ala Val His Ser Gln Leu Lys Asp Leu Val  
20 25 30

Asp Asn His Ala Ser Val Trp  
35

<210> 8

<211> 39

<212> PRT

<213> Homo sapiens

<400> 8

Leu Pro Glu Pro Leu Leu Leu Arg Val Leu Ala Ala Leu Pro Ala Ala  
1 5 10 15

Glu Leu Val Gln Ala Cys Arg Leu Val Cys Leu Arg Trp Lys Glu Leu  
 20 25 30

Val Asp Gly Ala Pro Leu Trp  
 35

<210> 9

<211> 42

<212> PRT

<213> Homo sapiens

<400> 9

Leu Pro Gly Glu Val Leu Glu Tyr Ile Leu Cys Cys Gly Leu Thr Ser  
 1 5 10 15

Ala Ala Asp Ile Gly Arg Val Ser Ser Thr Cys Arg Arg Leu Arg Lys  
 20 25 30

Leu Cys Gln Ser Ser Gly Lys Val Trp Lys  
 35 40

<210> 10

<211> 39

<212> PRT

<213> Homo sapiens

<400> 10

Leu Pro Leu His Met Leu Asn Asn Ile Leu Tyr Arg Phe Ser Asp Gly  
 1 5 10 15

Trp Asp Ile Ile Thr Leu Gly Gln Val Thr Pro Thr Leu Tyr Met Leu  
 20 25 30

Ser Glu Asp Arg Gln Leu Trp  
 35

<210> 11

<211> 37

<212> PRT

<213> Homo sapiens

<400> 11

Leu Pro Tyr Glu Leu Ala Ile Asn Ile Phe Gln Tyr Leu Asp Arg Lys  
1 5 10 15

Glu Leu Gly Arg Cys Ala Gln Val Cys Thr Trp Lys Val Ile Ala Glu  
20 25 30

Asp Glu Val Leu Trp  
35

<210> 12

<211> 38

<212> PRT

<213> Homo sapiens

<400> 12

Leu Pro Thr Asp Pro Leu Leu Leu Ile Leu Ser Phe Leu Asp Tyr Arg  
1 5 10 15

Asp Leu Ile Asn Cys Cys Tyr Val Ser Arg Arg Leu Ser Gln Leu Ser  
20 25 30

Ser His Asp Pro Leu Trp  
35

<210> 13

<211> 37

<212> PRT

<213> Homo sapiens

<400> 13

Leu Pro Lys Glu Leu Ala Leu Tyr Val Leu Ser Phe Leu Glu Pro Lys  
1 5 10 15

Asp Leu Leu Gln Ala Ala Gln Thr Cys Arg Trp Arg Ile Leu Ala Glu  
20 25 30

Asp Asn Leu Leu Trp  
35

<210> 14

<211> 36

<212> PRT

<213> Homo sapiens

<400> 14

Leu Pro Ile Asp Val Gln Leu Tyr Ile Leu Ser Pro Leu Ser Pro His  
1 5 10 15

Asp Leu Cys Gln Leu Gly Ser Thr Asn His Tyr Trp Asn Glu Thr Val  
20 25 30

Arg Asp Pro Ile  
35

<210> 15

<211> 39

<212> PRT

<213> Homo sapiens

<400> 15

Leu Pro Glu Asn Ile Leu Leu Glu Leu Phe Ile His Ile Pro Ala Arg  
1 5 10 15

Gln Leu Leu Leu Arg Cys Arg Pro Val Cys Ser Leu Trp Arg Asp Leu  
20 25 30

Ile Asp Leu Val Thr Leu Trp  
35

<210> 16

<211> 360

<212> PRT

<213> mouse

<220>

<221> misc\_feature

<222> (353)..(358)

<223> Xaa = any amino acid

<400> 16

Met Pro Phe Leu Gly Gln Asp Trp Arg Ser Pro Gly Trp Ser Trp Ile  
1 5 10 15

Lys Thr Glu Asp Gly Trp Lys Arg Cys Asp Pro Cys Ser His Glu Leu  
20 25 30

Arg Ser Glu Asp Ser Gln Tyr Thr Ile Asn His Ser Ile Ile Leu Asn  
 35 40 45  
 Ser Gly Glu Glu Glu Ile Phe Asn Asn Glu Cys Glu Tyr Ala Ala Lys  
 50 55 60  
 Lys Arg Lys Lys Glu His Phe Gly Asn Asp Thr Ala Ala His Ser Phe  
 65 70 75 80  
 Tyr Arg Glu Lys Trp Ile Tyr Val His Lys Glu Ser Thr Lys Glu Arg  
 85 90 95  
 His Gly Tyr Cys Thr Leu Gly Glu Ala Phe Asn Arg Leu Asp Phe Ser  
 100 105 110  
 Ser Ala Leu Gln Asp Ile Arg Arg Phe Thr Tyr Val Val Lys Leu Leu  
 115 120 125  
 Gln Leu Ile Ala Lys Ser Gln Leu Thr Ser Leu Ser Gly Val Ala Gln  
 130 135 140  
 Lys Asn Tyr Phe Asn Ile Leu Asp Lys Ile Val Gln Lys Val Leu Asp  
 145 150 155 160  
 Asp His Gln Asn Pro Arg Leu Leu Lys Gly Leu Leu Gln Asp Leu Ser  
 165 170 175  
 Ser Thr Leu Gly Ile Leu Val Arg Gly Val Gly Lys Ser Val Leu Val  
 180 185 190  
 Gly Asn Ile Asn Ile Trp Thr Cys Arg Leu Glu Thr Val Leu Ser Trp  
 195 200 205  
 Gln Gln Gln Leu Gln Asn Leu Gln Val Thr Lys Gln Val Asn Thr Gly  
 210 215 220  
 Leu Thr Leu Ser Asp Leu Pro Leu His Met Leu Asn Asn Ile Leu Tyr  
 225 230 235 240  
 Arg Phe Ser Asp Gly Trp Asp Leu Val Thr Leu Gly Gln Val Thr Pro  
 245 250 255  
 Thr Leu Tyr Met Leu Ser Glu Asp Arg Arg Leu Trp Lys Arg Leu Cys  
 260 265 270  
 Gln Tyr His Phe Ala Glu Gln Gln Phe Cys Arg His Leu Ile Leu Ser  
 275 280 285  
 Glu Lys Gly His Leu Glu Trp Lys Leu Met Tyr Phe Thr Leu Gln Lys  
 290 295 300  
 Tyr Tyr Pro Thr Lys Glu Gln Tyr Gly Asp Thr Leu His Phe Cys Arg  
 305 310 315 320  
 His Cys Ser Ile Leu Phe Trp Lys Asp Ser Gly His Pro Cys Thr Arg  
 325 330 335  
 Ala Asp Pro Asp Ser Cys Phe Thr Pro Val Ser Pro Glu His Glu Ile  
 340 345 350

Xaa Leu Phe Lys Phe Xaa Trp Cys  
 355 360

<210> 17

<211> 272

<212> PRT

<213> Homo sapiens

<400> 17

Leu Ile Leu Thr Ser Val Leu Leu Phe Gln Arg His Gly Tyr Cys Thr  
 1 5 10 15

Leu Gly Glu Ala Phe Asn Arg Leu Asp Phe Ser Ser Ala Ile Gln Asp  
 20 25 30

Ile Arg Thr Phe Asn Tyr Val Val Lys Leu Leu Gln Leu Ile Ala Lys  
 35 40 45

Ser Gln Leu Thr Ser Leu Ser Gly Val Ala Gln Lys Asn Tyr Phe Asn  
 50 55 60

Ile Leu Asp Lys Ile Val Gln Lys Val Leu Asp Asp His His Asn Pro  
 65 70 75 80

Arg Leu Leu Lys Asp Leu Leu Gln Asp Leu Ser Ser Thr Leu Cys Ile  
 85 90 95

Leu Thr Arg Gly Val Gly Lys Ser Val Leu Val Gly Asn Ile Asn Ile  
 100 105 110

Trp Thr Cys Arg Leu Glu Thr Ile Leu Ala Trp Gln Gln Gln Leu Gln  
 115 120 125

Asp Leu Gln Met Thr Lys Gln Val Asn Asn Gly Leu Thr Leu Ser Asp  
 130 135 140

Leu Pro Leu His Met Leu Asn Asn Ile Leu Tyr Arg Phe Ser Asp Gly  
 145 150 155 160

Trp Asp Ile Leu Thr Leu Gly Gln Val Thr Pro Thr Leu Tyr Met Leu  
 165 170 175

Ser Glu Asp Arg Gln Leu Trp Lys Lys Leu Cys Gln Tyr His Phe Ala  
 180 185 190

Glu Lys Gln Phe Cys Arg His Leu Leu Leu Ser Glu Lys Gly His Leu  
 195 200 205

Glu Trp Lys Leu Met Tyr Phe Ala Leu Gln Lys His Tyr Pro Ala Lys  
 210 215 220

Glu Gln Tyr Gly Asp Thr Leu His Phe Cys Arg His Cys Ser Ile Leu  
 225 230 235 240



Phe Trp Lys Asp Ser Gly His Pro Cys Thr Ala Ala Asp Pro Asp Ser  
245 250 255

Cys Phe Thr Pro Val Ser Pro Gln His Glu Ile Asp Leu Phe Lys Phe  
260 265 270

<210> 18

<211> 344

<212> PRT

<213> Homo sapiens

<400> 18

Met Pro Phe Leu Gly Gln Asp Trp Arg Ser Pro Gly Gln Asn Trp Tyr  
1 5 10 15

Lys Thr Ala Asp Gly Trp Lys Arg Phe Leu Asp Glu Lys Ser Gly Ser  
20 25 30

Phe Val Ser Asp Leu Ser Ser Tyr Cys Asn Lys Glu Val Tyr Asn Lys  
35 40 45

Glu Asn Leu Phe Asn Ser Leu Asn Tyr Asp Val Ala Ala Lys Lys Arg  
50 55 60

Lys Lys Asp Met Leu Asn Ser Lys Thr Lys Thr Gln Tyr Leu His Gln  
65 70 75 80

Glu Lys Trp Thr Tyr Val His Lys Gly Ser Thr Lys Glu Arg His Gly  
85 90 95

Tyr Cys Thr Leu Gly Glu Ala Phe Asn Arg Leu Asp Glu Ser Thr Ala  
100 105 110

Ile Leu Asp Ser Arg Arg Glu Asn Tyr Val Val Arg Leu Leu Glu Leu  
115 120 125

Thr Ala Lys Ser Gln Leu Thr Ser Leu Ser Gly Ile Ala Gln Lys Asn  
130 135 140

Phe Met Asn Leu Leu Glu Lys Val Val Leu Lys Val Leu Glu Asp Gln  
145 150 155 160

Gln Asn Ile Arg Leu Ile Arg Glu Leu Leu Gln Thr Leu Tyr Thr Ser  
165 170 175

Leu Cys Thr Leu Val Gln Arg Val Gly Lys Ser Val Leu Val Gly Asn  
180 185 190

Ile Asn Met Trp Val Tyr Arg Met Glu Thr Ile Leu His Trp Gln Gln  
195 200 205

Gln Leu Asn Asn Ile Gln Ile Thr Arg Pro Ala Phe Lys Gly Leu Thr  
210 215 220

Phe Thr Asp Leu Pro Leu Cys Leu Gln Leu Asn Ile Met Gln Arg Leu  
 225 230 235 240  
 Ser Asp Gly Arg Asp Leu Val Ser Leu Gly Gln Ala Ala Pro Asp Leu  
 245 250 255  
 His Val Leu Ser Glu Asp Arg Leu Leu Trp Lys Lys Leu Cys Gln Tyr  
 260 265 270  
 His Phe Ser Glu Arg Gln Ile Arg Lys Arg Leu Ile Leu Ser Asp Lys  
 275 280 285  
 Gly Gln Leu Asp Trp Lys Lys Met Tyr Phe Lys Leu Val Arg Cys Tyr  
 290 295 300  
 Pro Arg Arg Glu Gln Tyr Gly Val Thr Leu Gln Leu Cys Lys His Cys  
 305 310 315 320  
 His Ile Leu Ser Trp Lys Gly Thr Asp His Pro Cys Thr Ala Asn Asn  
 325 330 335  
 Pro Glu Ser Cys Ser Val Ser Leu  
 340

<210> 19

<211> 350

<212> PRT

<213> rat

<400> 19

Met Pro Phe Leu Gly Gln Asp Trp Arg Ser Pro Gly Gln Ser Trp Val  
 1 5 10 15  
 Lys Thr Ala Asp Gly Trp Lys Arg Phe Leu Asp Glu Lys Ser Gly Thr  
 20 25 30  
 Phe Val Ser Asp Leu Ser Ser Tyr Cys Asn Lys Glu Asn Leu Phe Asn  
 35 40 45  
 Ser Leu Asn Tyr Asp Val Ala Ala Lys Lys Arg Lys Lys Asp Ile Gln  
 50 55 60  
 Asn Ser Lys Thr Lys Thr Gln Tyr Phe His Gln Glu Lys Trp Ile Tyr  
 65 70 75 80  
 Val His Lys Gly Ser Thr Lys Glu Arg His Gly Tyr Cys Thr Leu Gly  
 85 90 95  
 Glu Ala Phe Asn Arg Leu Asp Phe Ser Thr Ala Ile Leu Asp Ser Arg  
 100 105 110  
 Arg Glu Asn Tyr Val Val Arg Leu Leu Glu Leu Thr Ala Lys Ser Gln  
 115 120 125

Leu Thr Ser Leu Ser Gly Ile Ala Gln Lys Asn Phe Met Asn Leu Leu  
 130 135 140  
 Glu Lys Val Val Leu Lys Val Leu Glu Asp Gln Gln Asn Ile Arg Leu  
 145 150 155 160  
 Ile Arg Glu Leu Leu Gln Thr Leu Tyr Thr Ser Leu Cys Thr Leu Val  
 165 170 175  
 Gln Arg Val Gly Lys Ser Val Leu Val Gly Asn Leu Asn Met Trp Val  
 180 185 190  
 Tyr Arg Met Glu Thr Thr Leu His Trp Gln Gln Gln Leu Asn Ser Ile  
 195 200 205  
 Gln Ile Ser Arg Pro Ala Phe Lys Gly Leu Thr Ile Thr Asp Leu Pro  
 210 215 220  
 Val Cys Leu Gln Leu Asn Ile Met Gln Arg Leu Ser Asp Gly Arg Asp  
 225 230 235 240  
 Leu Val Ser Leu Gly Gln Ala Ala Pro Asp Leu His Val Leu Ser Glu  
 245 250 255  
 Asp Arg Leu Leu Trp Lys Arg Leu Cys Gln Tyr His Phe Ser Glu Arg  
 260 265 270  
 Gln Ile Arg Lys Arg Leu Leu Leu Ser Asp Lys Gly Gln Leu Asp Trp  
 275 280 285  
 Lys Lys Met Tyr Phe Lys Leu Val Arg Cys Tyr Pro Arg Arg Glu Gln  
 290 295 300  
 Tyr Gly Val Thr Leu Gln Leu Cys Lys His Cys His Ile Leu Ser Trp  
 305 310 315 320  
 Lys Gly Thr Asp His Pro Cys Thr Ala Asn Asn Pro Glu Ser Cys Ser  
 325 330 335  
 Val Ser Leu Ser Pro Gln Asp Glu Ile Asn Leu Phe Lys Phe  
 340 345 350

<210> 20

<211> 1053

<212> DNA

<213> rat

<400> 20

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cacaacctct gccggaagtg tgccaacgac atcttccagg ctgccaatcc ctactggacc	180
aaccgcggtg gctcgggtgc catgtctgga ggctcgtttcc gctgcccctc gtgccgccat	240

gaagtgatca tggaccggca tgggggtgtac ggtctgcaga ggaacctgct ggtggagaac 300  
 atcatcgaca tctacaagca ggaatgctcc agtcggcccc tgcagaaagg cagccacccg 360  
 atgtgcaagg aacacgaaga cgagaaaatc aacatctact gtctcacgtg cgaggtgcct 420  
 acttgctcct tgtgcaaggt gttcggggct caccaggcct gtgaagttgc ccccttacia 480  
 agcatcttcc aaggacagaa gactgaactg agcaattgca tctccatgct ggtggcaggg 540  
 aacgaccgag ttcagactat catctcgcag ctggaggact cctgccgagt gaccaaggaa 600  
 aacagccacc aggtgaagga ggaactgagc cacaagtttg acgccctcta cgccatcctg 660  
 gacgagaaga agagtgaagct gctgcagcgg atcactcagg agcaggagga gaagctggac 720  
 ttcacgcagg ccctgatcct ccagtaccga gagcagttgg aaaagtcgac caagcttggtg 780  
 gaaacagcca tccagtcctt ggatgagccc ggagggggcca ccttcctctt gagtgccaaag 840  
 ccgctcatca agagcattgt agaagcttcc aagggctgcc agctggggaa gacagaacaa 900  
 ggctttgaga acatggacta ctttactctg aatttagaac acatagcaga ggccttgagg 960  
 gccatcgact ttgggacaga tgaggaggag gagtttactg aagaggagga ggaggaggat 1020  
 caagaagagg gcgtgtccac agagggacac caa 1053

<210> 21

<211> 351

<212> PRT

<213> rat

<400> 21

Met Asp Tyr Lys Ser Gly Leu Ile Pro Asp Gly Asn Ala Met Glu Asn  
 1 5 10 15  
 Leu Glu Lys Gln Leu Ile Cys Pro Ile Cys Leu Glu Met Phe Thr Lys  
 20 25 30  
 Pro Val Val Ile Leu Pro Cys Gln His Asn Leu Cys Arg Lys Cys Ala  
 35 40 45  
 Asn Asp Ile Phe Gln Ala Ala Asn Pro Tyr Trp Thr Asn Arg Gly Gly  
 50 55 60  
 Ser Val Ser Met Ser Gly Gly Arg Phe Arg Cys Pro Ser Cys Arg His  
 65 70 75 80  
 Glu Val Ile Met Asp Arg His Gly Val Tyr Gly Leu Gln Arg Asn Leu  
 85 90 95  
 Leu Val Glu Asn Ile Ile Asp Ile Tyr Lys Gln Glu Cys Ser Ser Arg  
 100 105 110

Pro Leu Gln Lys Gly Ser His Pro Met Cys Lys Glu His Glu Asp Glu  
 115 120 125  
 Lys Ile Asn Ile Tyr Cys Leu Thr Cys Glu Val Pro Thr Cys Ser Leu  
 130 135 140  
 Cys Lys Val Phe Gly Ala His Gln Ala Cys Glu Val Ala Pro Leu Gln  
 145 150 155 160  
 Ser Ile Phe Gln Gly Gln Lys Thr Glu Leu Ser Asn Cys Ile Ser Met  
 165 170 175  
 Leu Val Ala Gly Asn Asp Arg Val Gln Thr Ile Ile Ser Gln Leu Glu  
 180 185 190  
 Asp Ser Cys Arg Val Thr Lys Glu Asn Ser His Gln Val Lys Glu Glu  
 195 200 205  
 Leu Ser His Lys Phe Asp Ala Leu Tyr Ala Ile Leu Asp Glu Lys Lys  
 210 215 220  
 Ser Glu Leu Leu Gln Arg Ile Thr Gln Glu Gln Glu Glu Lys Leu Asp  
 225 230 235 240  
 Phe Ile Glu Ala Leu Ile Leu Gln Tyr Arg Glu Gln Leu Glu Lys Ser  
 245 250 255  
 Thr Lys Leu Val Glu Thr Ala Ile Gln Ser Leu Asp Glu Pro Gly Gly  
 260 265 270  
 Ala Thr Phe Leu Leu Ser Ala Lys Pro Leu Ile Lys Ser Ile Val Glu  
 275 280 285  
 Ala Ser Lys Gly Cys Gln Leu Gly Lys Thr Glu Gln Gly Phe Glu Asn  
 290 295 300  
 Met Asp Tyr Phe Thr Leu Asn Leu Glu His Ile Ala Glu Ala Leu Arg  
 305 310 315 320  
 Ala Ile Asp Phe Gly Thr Asp Glu Glu Glu Glu Phe Thr Glu Glu Glu  
 325 330 335  
 Glu Glu Glu Asp Gln Glu Glu Gly Val Ser Thr Glu Gly His Gln  
 340 345 350

<210> 22

<211> 2097

<212> DNA

<213> Homo sapiens

<400> 22

ttctcaggta ctttatcgga cctctcacat ggctgcatgc ccagaaatgt gatgatattg 60

ttgacagcct cttcaagggt tttggtagaa ctgagggcaa aggtttcctc tttctcaaag 120

gtatctccca cctcttccca agcagcagca aagttaggct gacctcgtct gttatgtaaa	180
ggatgcgtag ggatgggagg gcgatgagga ctaggatgat ggcgggcagg atagttcaga	240
cggtttccat ttcctgagcg tctgagatgt tagtattagt tagttttggt gtgagtgtta	300
gaattcgggc accaggagaa ggaagccaac aggatccgac ccggtgtttt gtgacaaagg	360
caagaccccc aggtctactt agagcaaagt tagtagagga ggcagctagg cgtggctctc	420
attccttccc acagaatgga ttataagtcg agcctgatcc aggatgggaa tcccatggag	480
aacttgagga agcagctgat ctgccctatc tgcctggaga tgtttaccaa gccagtggtc	540
atcttgccgt gccagcacia cctgtgccg aagtgtgcca atgacatctt ccaggctgca	600
aatccctact ggaccagccg gggcagctca gtgtccatgt ctggaggccg tttccgctgc	660
cccacctgcc gccacgaggt gatcatggat cgtcacggag tgtacggcct gcagaggaac	720
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aagggcagtc accccatgtg caaggagcac gaagatgaga aaatcaacat ctactgtctc	840
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gtggcccat tgcagagtgt cttccaggga caaaagactg aactgaataa ctgtatctcc	960
atgctgggtg cggggaatga ccgtgtgcag accatcatca ctgagctgga ggattcccgt	1020
cgagtgacca aggagaacag tcaccaggta aaggaagagc tgagccagaa gtttgacacg	1080
ttgtatgcca tcctggatga gaagaaaagt gagttgctgc agcgatcac gcaggagcag	1140
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tccaciaagc tgggtggaac tgccatccag tcctggacg agcctggggg agccacctc	1260
ctcttgactg ccaagcaact catcaaaagc attgtggaag cttccaaggg ctgccagctg	1320
gggaagacag agcagggtt tgagaacatg gacttcttta ctttgattt agagcacata	1380
gcagacgcc tgagagccat tgactttggg acagatgagg aagaggaaga attcattgaa	1440
gaagaagatc aggaagagga agagtccaca gaagggaagg aagaaggaca ccagtaagga	1500
gctggatgaa tgagaggccc ccagatgcag agagactgga gaggggtggg aggggcccag	1560
cggccttggt gacaggccca ggggtggagg ggtcggggcc cctggagggg caatggggag	1620
gtgatgtctt ctctctgctc agagagcagg gactagggtg ggaccctcac cgctgcgtcc	1680
agcagacact gaaccagaat tggaaacgtg cttgaaacia tcacacagga cacttttcta	1740
cattgggtgca aaatggaata tttgtacat ttttaaatg tgatttttgt atatacttgt	1800
atatgtatgc caatttggtg ctttttgtaa aggaactttt gtataataat gcctggctgt	1860
tgggtgacct gcgattgtca gaaagagggg aaggaagcca ggttgataca gctgcccact	1920
tcctttcctg agcaggagga tggggtagca ctacaggga cgatgtgctg tatttcagt	1980

cctatcccag acatacgggg tggttaactga gtttgtgtta tatgttggtt taataaatgc 2040

acaatgctct cttcctgttc ttcaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaa 2097

<210> 23

<211> 340

<212> PRT

<213> Homo sapiens

<400> 23

Met Glu Asn Leu Glu Lys Gln Leu Ile Cys Pro Ile Cys Leu Glu Met  
1 5 10 15

Phe Thr Lys Pro Val Val Ile Leu Pro Cys Gln His Asn Leu Cys Arg  
20 25 30

Lys Cys Ala Asn Asp Ile Phe Gln Ala Ala Asn Pro Tyr Trp Thr Ser  
35 40 45

Arg Gly Ser Ser Val Ser Met Ser Gly Gly Arg Phe Arg Cys Pro Thr  
50 55 60

Cys Arg His Glu Val Ile Met Asp Arg His Gly Val Tyr Gly Leu Gln  
65 70 75 80

Arg Asn Leu Leu Val Glu Asn Ile Ile Asp Ile Tyr Lys Gln Glu Cys  
85 90 95

Ser Ser Arg Pro Leu Gln Lys Gly Ser His Pro Met Cys Lys Glu His  
100 105 110

Glu Asp Glu Lys Ile Asn Ile Tyr Cys Leu Thr Cys Glu Val Pro Thr  
115 120 125

Cys Ser Met Cys Lys Val Phe Gly Ile His Lys Ala Cys Glu Val Ala  
130 135 140

Pro Leu Gln Ser Val Phe Gln Gly Gln Lys Thr Glu Leu Asn Asn Cys  
145 150 155 160

Ile Ser Met Leu Val Ala Gly Asn Asp Arg Val Gln Thr Ile Ile Thr  
165 170 175

Gln Leu Glu Asp Ser Arg Arg Val Thr Lys Glu Asn Ser His Gln Val  
180 185 190

Lys Glu Glu Leu Ser Gln Lys Phe Asp Thr Leu Tyr Ala Ile Leu Asp  
195 200 205

Glu Lys Lys Ser Glu Leu Leu Gln Arg Ile Thr Gln Glu Gln Glu Glu  
210 215 220

Lys Leu Ser Phe Ile Glu Ala Leu Ile Gln Gln Tyr Gln Glu Gln Leu  
 225 230 235 240  
 Asp Lys Ser Thr Lys Leu Val Glu Thr Ala Ile Gln Ser Leu Asp Glu  
 245 250 255  
 Pro Gly Gly Ala Thr Phe Leu Leu Thr Ala Lys Gln Leu Ile Lys Ser  
 260 265 270  
 Ile Val Glu Ala Ser Lys Gly Cys Gln Leu Gly Lys Thr Glu Gln Gly  
 275 280 285  
 Phe Glu Asn Met Asp Phe Phe Thr Leu Asp Leu Glu His Ile Ala Asp  
 290 295 300  
 Ala Leu Arg Ala Ile Asp Phe Gly Thr Asp Glu Glu Glu Glu Glu Phe  
 305 310 315 320  
 Ile Glu Glu Glu Asp Gln Glu Glu Glu Glu Ser Thr Glu Gly Lys Glu  
 325 330 335  
 Glu Gly His Gln  
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<210> 24

<211> 1050

<212> DNA

<213> rat

<400> 24

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tgcaacaagg agaatctgtt caacagcctg aactacgatg ttgcagccaa gaagagaaag	180
aaagacatac agaacagcaa aacaaaaact cagtatttcc atcaggagaa gtggatctat	240
gttcacaaag ggagtactaa ggagcgccat ggatactgca ctttggggga agctttcaac	300
agactggact tctcgactgc catcctggat tccagaagat tcaactacgt agtaaggctg	360
ttggagctga tagcaaagtc acagctcaca tccctgagtg gcatcgccca aaagaacttc	420
atgaacattt tggaaaaagt agtactgaaa gttcttgaag accagcaaaa cataagactc	480
atacgggaac ttctccagac cctctacaca tccttatgca cgctgggtcca gagagtcggc	540
aagtccgtgc tgggtgggcaa catcaacatg tgggtgtatc gaatggagac cactctacac	600
tggcaacagc agctgaacag catccagatc agcaggccgg ctttcaaagg tctcacgatc	660
accgacctgc ctgtgtgctt acaactgaac atcatgcaga ggctgagcga tgggcggggac	720
ctggtcagcc tgggccaggc agccccagac ctgcatgtgc tcagtgaaga cgggctactg	780



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 tctgacaaag ggcagctgga ttggaagaag atgtacttta agcttgtgcg atgttaccca 900  
 agaagagaac agtatggggt caccctgcag ctttgcaaac actgccacat tctctcctgg 960  
 aagggcactg accatccatg cacggccaac aaccagaga gctgctccgt ctcactttca 1020  
 cccaagact ttattaactt gttcaagttc 1050

<210> 25

<211> 350

<212> PRT

<213> rat

<400> 25

Met	Pro	Phe	Leu	Gly	Gln	Asp	Trp	Arg	Ser	Pro	Gly	Gln	Ser	Trp	Val	1	5	10	15
Lys	Thr	Ala	Asp	Gly	Trp	Lys	Arg	Phe	Leu	Asp	Glu	Lys	Ser	Gly	Thr	20	25	30	
Phe	Val	Ser	Asp	Leu	Ser	Ser	Tyr	Cys	Asn	Lys	Glu	Asn	Leu	Phe	Asn	35	40	45	
Ser	Leu	Asn	Tyr	Asp	Val	Ala	Ala	Lys	Lys	Arg	Lys	Lys	Asp	Ile	Gln	50	55	60	
Asn	Ser	Lys	Thr	Lys	Thr	Gln	Tyr	Phe	His	Gln	Glu	Lys	Trp	Ile	Tyr	65	70	75	80
Val	His	Lys	Gly	Ser	Thr	Lys	Glu	Arg	His	Gly	Tyr	Cys	Thr	Leu	Gly	85	90	95	
Glu	Ala	Phe	Asn	Arg	Leu	Asp	Phe	Ser	Thr	Ala	Ile	Leu	Asp	Ser	Arg	100	105	110	
Arg	Phe	Asn	Tyr	Val	Val	Arg	Leu	Leu	Glu	Leu	Ile	Ala	Lys	Ser	Gln	115	120	125	
Leu	Thr	Ser	Leu	Ser	Gly	Ile	Ala	Gln	Lys	Asn	Phe	Met	Asn	Ile	Leu	130	135	140	
Glu	Lys	Val	Val	Leu	Lys	Val	Leu	Glu	Asp	Gln	Gln	Asn	Ile	Arg	Leu	145	150	155	160
Ile	Arg	Glu	Leu	Leu	Gln	Thr	Leu	Tyr	Thr	Ser	Leu	Cys	Thr	Leu	Val	165	170	175	
Gln	Arg	Val	Gly	Lys	Ser	Val	Leu	Val	Gly	Asn	Ile	Asn	Met	Trp	Val	180	185	190	
Tyr	Arg	Met	Glu	Thr	Thr	Leu	His	Trp	Gln	Gln	Gln	Leu	Asn	Ser	Ile	195	200	205	

Gln Ile Ser Arg Pro Ala Phe Lys Gly Leu Thr Ile Thr Asp Leu Pro  
 210 215 220  
 Val Cys Leu Gln Leu Asn Ile Met Gln Arg Leu Ser Asp Gly Arg Asp  
 225 230 235 240  
 Leu Val Ser Leu Gly Gln Ala Ala Pro Asp Leu His Val Leu Ser Glu  
 245 250 255  
 Asp Arg Leu Leu Trp Lys Arg Leu Cys Gln Tyr His Phe Ser Glu Arg  
 260 265 270  
 Gln Ile Arg Lys Arg Leu Ile Leu Ser Asp Lys Gly Gln Leu Asp Trp  
 275 280 285  
 Lys Lys Met Tyr Phe Lys Leu Val Arg Cys Tyr Pro Arg Arg Glu Gln  
 290 295 300  
 Tyr Gly Val Thr Leu Gln Leu Cys Lys His Cys His Ile Leu Ser Trp  
 305 310 315 320  
 Lys Gly Thr Asp His Pro Cys Thr Ala Asn Asn Pro Glu Ser Cys Ser  
 325 330 335  
 Val Ser Leu Ser Pro Gln Asp Phe Ile Asn Leu Phe Lys Phe  
 340 345 350

<210> 26

<211> 1035

<212> DNA

<213> Homo sapiens

<400> 26  
 atgccattcc tcgggcagga ctggcggtcc cccgggcaga actgggtgaa gacggccgac 60  
 ggctggaagc gcttcctgga tgagaagagc ggcagtttcg tgagcgacct cagcagttac 120  
 tgcaacaagg aggtatacaa taaggagaat cttttcaaca gcctgaacta tgatgttgca 180  
 gccaagaaga gaaagaagga catgctgaat agcaaaacca aaactcagta tttccaccaa 240  
 gaaaaatgga tctatgttca caaaggaagt actaaagagc gccatggata ttgcaccctg 300  
 ggggaagctt tcaacagact ggactttctca actgccattc tggattccag aagatttaac 360  
 tacgtggtcc ggctgttgga gctgatagca aagtcacagc tcacatccct gagtggcatc 420  
 gcccaaaaga acttcatgaa tatttttgaa aaagtggtag tgaaagtcct tgaagaccag 480  
 caaaacatta gactaataag ggaactactc cagaccctct acacatcctt atgtacactg 540  
 gtccaaagag tcggcaagtc tgtgctggtc gggaacatta acatgtgggt gtatcggatg 600  
 gagacgattc tccactggca gcagcagctg aacaacattc agatcaccag gcctgccttc 660

aaaggcctca ccttactga cctgcctttg tgcctacaac tgaacatcat gcagaggctg 720  
 agcgacgggc gggacctggt cagcctgggc caggctgccc ccgacctgca cgtgctcagc 780  
 gaagaccggc tgctgtggaa gaaactctgc cagtaccact tctccgagcg gcagatccgc 840  
 aaacgattaa ttctgtcaga caaagggcag ctggattgga agaagatgta tttcaaactt 900  
 gtccgatgtt acccaaggaa agagcagtat ggagataccc ttcagctctg caaacactgt 960  
 cacatccttt cctggaaggg cactgaccat ccgtgcactg ccaataaccc agagagctgc 1020  
 tccgtttcac ttgga 1035

<210> 27

<211> 344

<212> PRT

<213> Homo sapiens

<400> 27

Met	Pro	Phe	Leu	Gly	Gln	Asp	Trp	Arg	Ser	Pro	Gly	Gln	Asn	Trp	Val	1	5	10	15
Lys	Thr	Ala	Asp	Gly	Trp	Lys	Arg	Phe	Leu	Asp	Glu	Lys	Ser	Gly	Ser	20	25	30	
Phe	Val	Ser	Asp	Leu	Ser	Ser	Tyr	Cys	Asn	Lys	Glu	Val	Tyr	Asn	Lys	35	40	45	
Glu	Asn	Leu	Phe	Asn	Ser	Leu	Asn	Tyr	Asp	Val	Ala	Ala	Lys	Lys	Arg	50	55	60	
Lys	Lys	Asp	Met	Leu	Asn	Ser	Lys	Thr	Lys	Thr	Gln	Tyr	Phe	His	Gln	65	70	75	80
Glu	Lys	Trp	Ile	Tyr	Val	His	Lys	Gly	Ser	Thr	Lys	Glu	Arg	His	Gly	85	90	95	
Tyr	Cys	Thr	Leu	Gly	Glu	Ala	Phe	Asn	Arg	Leu	Asp	Phe	Ser	Thr	Ala	100	105	110	
Ile	Leu	Asp	Ser	Arg	Arg	Phe	Asn	Tyr	Val	Val	Arg	Leu	Leu	Glu	Leu	115	120	125	
Ile	Ala	Lys	Ser	Gln	Leu	Thr	Ser	Leu	Ser	Gly	Ile	Ala	Gln	Lys	Asn	130	135	140	
Phe	Met	Asn	Ile	Leu	Glu	Lys	Val	Val	Leu	Lys	Val	Leu	Glu	Asp	Gln	145	150	155	160
Gln	Asn	Ile	Arg	Leu	Ile	Arg	Glu	Leu	Leu	Gln	Thr	Leu	Tyr	Thr	Ser	165	170	175	

Leu Cys Thr Leu Val Gln Arg Val Gly Lys Ser Val Leu Val Gly Asn  
 180 185 190  
 Ile Asn Met Trp Val Tyr Arg Met Glu Thr Ile Leu His Trp Gln Gln  
 195 200 205  
 Gln Leu Asn Asn Ile Gln Ile Thr Arg Pro Ala Phe Lys Gly Leu Thr  
 210 215 220  
 Phe Thr Asp Leu Pro Leu Cys Leu Gln Leu Asn Ile Met Gln Arg Leu  
 225 230 235 240  
 Ser Asp Gly Arg Asp Leu Val Ser Leu Gly Gln Ala Ala Pro Asp Leu  
 245 250 255  
 His Val Leu Ser Glu Asp Arg Leu Leu Trp Lys Lys Leu Cys Gln Tyr  
 260 265 270  
 His Phe Ser Glu Arg Gln Ile Arg Lys Arg Leu Ile Leu Ser Asp Lys  
 275 280 285  
 Gly Gln Leu Asp Trp Lys Lys Met Tyr Phe Lys Leu Val Arg Cys Tyr  
 290 295 300  
 Pro Arg Lys Glu Gln Tyr Gly Asp Thr Leu Gln Leu Cys Lys His Cys  
 305 310 315 320  
 His Ile Leu Ser Trp Lys Gly Thr Asp His Pro Cys Thr Ala Asn Asn  
 325 330 335  
 Pro Glu Ser Cys Ser Val Ser Leu  
 340

<210> 28

<211> 64

<212> PRT

<213> Homo sapiens

<400> 28

Cys Pro Ile Cys Leu Glu Met Phe Ser Lys Pro Val Val Ile Leu Pro  
 1 5 10 15  
 Cys Gln His Asn Leu Cys Arg Lys Cys Ala Asn Asp Val Phe Gln Ala  
 20 25 30  
 Ser Asn Pro Leu Trp Gln Ser Arg Gly Ser Thr Thr Val Ser Ser Gly  
 35 40 45  
 Gly Arg Phe Arg Cys Pro Ser Cys Arg His Glu Val Val Ile Asp Arg  
 50 55 60

<210> 29

<211> 57

<212> PRT

<213> Homo sapiens

<400> 29

Cys Pro Ile Cys Leu Glu Leu Leu Glu Asp Pro Leu Leu Leu Pro Cys  
1 5 10 15

Ala His Ser Leu Cys Phe Ser Cys Ala His Arg Ile Leu Val Ser Ser  
20 25 30

Cys Ser Ser Gly Glu Ser Ile Glu Pro Ile Thr Ala Phe Gln Cys Pro  
35 40 45

Thr Cys Arg Tyr Val Ile Ser Leu Asn  
50 55

<210> 30

<211> 57

<212> PRT

<213> Homo sapiens

<400> 30

Cys Pro Ile Cys Cys Ser Leu Phe Asp Asp Pro Arg Val Leu Pro Cys  
1 5 10 15

Ser His Asn Phe Cys Lys Lys Cys Leu Glu Gly Ile Leu Glu Gly Ser  
20 25 30

Val Arg Asn Ser Leu Trp Arg Pro Ala Pro Phe Lys Cys Pro Thr Cys  
35 40 45

Arg Lys Glu Thr Ser Ala Thr Gly Ile  
50 55

<210> 31

<211> 57

<212> PRT

<213> Homo sapiens

<400> 31

Cys Pro Ile Cys Leu Glu Leu Phe Glu Asp Pro Leu Leu Leu Pro Cys  
1 5 10 15

Ala His Ser Leu Cys Phe Ser Cys Ala His Arg Ile Leu Val Ser Ser  
20 25 30

Cys Ser Ser Gly Glu Ser Leu Glu Pro Ile Thr Ala Phe Gln Cys Pro  
 35 40 45

Thr Cys Arg Tyr Val Ile Ser Leu Asn  
 50 55

<210> 32

<211> 630

<212> DNA

<213> rat

<400> 32  
 atggactaca aagacgatga cgacaaagat tataaatctg gcttgattcc ggacggaaat 60  
 gctatggaga acctggagaa gcagctcatc tgccccatct gccttgagat gtttaccaag 120  
 cctgtggtca tcctgccctg ccagcacaaac ctctgccgga agtgtgccaa cgacatcttc 180  
 caggctgcca atccctactg gaccaaccgc ggtggctcgg tgtccatgtc tggaggtcgt 240  
 ttccgctgcc cctcgtgccg ccatgaagtg atcatggacc ggcattgggt gtacggtctg 300  
 cagaggaacc tgctggtgga gaacatcatc gacatctaca agcaggaatg ctccagtcgg 360  
 cccctgcaga aaggcagcca cccgatgtgc aaggaacacg aagacgagaa aatcaacatc 420  
 tactgtctca cgtgcgaggt gcctacttgc tccttgtgca aggtgttcgg ggctcaccag 480  
 gcctgtgaag ttgccccctt acaaagcatc ttccaaggac agaagactga actgagcaat 540  
 tgcattctca tgctggtggc agggaacgac cgagttcaga ctatcatctc gcagctggag 600  
 gactcctgcc gagtgaccaa ggtgaggggtg 630

<210> 33

<211> 202

<212> PRT

<213> rat

<400> 33

Met Asp Tyr Lys Ser Gly Leu Ile Pro Asp Gly Asn Ala Met Glu Asn  
 1 5 10 15

Leu Glu Lys Gln Leu Ile Cys Pro Ile Cys Leu Glu Met Phe Thr Lys  
 20 25 30

Pro Val Val Ile Leu Pro Cys Gln His Asn Leu Cys Arg Lys Cys Ala  
 35 40 45

Asn Asp Ile Phe Gln Ala Ala Asn Pro Tyr Trp Thr Asn Arg Gly Gly  
 50 55 60  
 Ser Val Ser Met Ser Gly Gly Arg Phe Arg Cys Pro Ser Cys Arg His  
 65 70 75 80  
 Glu Val Ile Met Asp Arg His Gly Val Tyr Gly Leu Gln Arg Asn Leu  
 85 90 95  
 Leu Val Glu Asn Ile Ile Asp Ile Tyr Lys Gln Glu Cys Ser Ser Arg  
 100 105 110  
 Pro Leu Gln Lys Gly Ser His Pro Met Cys Lys Glu His Glu Asp Glu  
 115 120 125  
 Lys Ile Asn Ile Tyr Cys Leu Thr Cys Glu Val Pro Thr Cys Ser Leu  
 130 135 140  
 Cys Lys Val Phe Gly Ala His Gln Ala Cys Glu Val Ala Pro Leu Gln  
 145 150 155 160  
 Ser Ile Phe Gln Gly Gln Lys Thr Glu Leu Ser Asn Cys Ile Ser Met  
 165 170 175  
 Leu Val Ala Gly Asn Asp Arg Val Gln Thr Ile Ile Ser Gln Leu Glu  
 180 185 190  
 Asp Ser Cys Arg Val Thr Lys Val Arg Val  
 195 200

<210> 34

<211> 1065

<212> DNA

<213> Homo sapiens

<400> 34  
 atgccattcc tcgggcagga ctggcgggtcc cccgggcaga actgggtgaa gacggccgac 60  
 ggctggaagc gcttcttgga tgagaagagc ggcagtttcg tgagcgacct cagcagttac 120  
 tgcaacaagg aggtatacaa taaggagaat cttttcaaca gcctgaacta tgatgttgca 180  
 gccaagaaga gaaagaagga catgctgaat agcaaaacca aaactcagta tttccaccaa 240  
 gaaaaatgga tctatgttca caaaggaagt actaaagagc gccatggata ttgcaccctg 300  
 ggggaagctt tcaacagact ggactttctca actgccattc tggattccag aagatttaac 360  
 tacgtggtcc ggctgttgga gctgatagca aagtcacagc tcacatccct gagtggcatc 420  
 gcccaaaaga acttcatgaa tattttggaa aaagtgggtac tgaaagtcct tgaagaccag 480  
 caaaacatta gactaataag ggaactactc cagaccctct acacatcctt atgtacactg 540  
 gtccaaagag tcggcaagtc tgtgctggtc gggaacatta acatgtgggt gtatcgggatg 600

gagacgattc tccactggca gcagcagctg aacaacattc agatcaccag gcctgccttc 660  
 aaaggcctca ccttcactga cctgcctttg tgcctacaac tgaacatcat gcagaggctg 720  
 agcgacgggc gggacctggt cagcctgggc caggctgccc ccgacctgca cgtgctcagc 780  
 gaagaccggc tgctgtggaa gaaactctgc cagtaccact tctccgagcg gcagatccgc 840  
 aaacgattaa ttctgtcaga caaagggcag ctggattgga agaagatgta tttcaaactt 900  
 gtccgatgtt acccaaggaa agagcagtat ggagataccc ttcagctctg caaacactgt 960  
 cacatccttt cctggaaggg cactgaccat ccgtgcaactg ccaataaccc agagagctgc 1020  
 tccgtttcac tttcacccca ggactttatc aacttggttca agttc 1065

<210> 35

<211> 355

<212> PRT

<213> Homo sapiens

<400> 35

Met	Pro	Phe	Leu	Gly	Gln	Asp	Trp	Arg	Ser	Pro	Gly	Gln	Asn	Trp	Val
1				5					10					15	
Lys	Thr	Ala	Asp	Gly	Trp	Lys	Arg	Phe	Leu	Asp	Glu	Lys	Ser	Gly	Ser
			20					25					30		
Phe	Val	Ser	Asp	Leu	Ser	Ser	Tyr	Cys	Asn	Lys	Glu	Val	Tyr	Asn	Lys
		35					40					45			
Glu	Asn	Leu	Phe	Asn	Ser	Leu	Asn	Tyr	Asp	Val	Ala	Ala	Lys	Lys	Arg
	50					55				60					
Lys	Lys	Asp	Met	Leu	Asn	Ser	Lys	Thr	Lys	Thr	Gln	Tyr	Phe	His	Gln
65					70					75					80
Glu	Lys	Trp	Ile	Tyr	Val	His	Lys	Gly	Ser	Thr	Lys	Glu	Arg	His	Gly
			85						90					95	
Tyr	Cys	Thr	Leu	Gly	Glu	Ala	Phe	Asn	Arg	Leu	Asp	Phe	Ser	Thr	Ala
			100					105					110		
Ile	Leu	Asp	Ser	Arg	Arg	Phe	Asn	Tyr	Val	Val	Arg	Leu	Leu	Glu	Leu
		115					120					125			
Ile	Ala	Lys	Ser	Gln	Leu	Thr	Ser	Leu	Ser	Gly	Ile	Ala	Gln	Lys	Asn
	130					135					140				
Phe	Met	Asn	Ile	Leu	Glu	Lys	Val	Val	Leu	Lys	Val	Leu	Glu	Asp	Gln
145					150					155					160



Gln Asn Ile Arg Leu Ile Arg Glu Leu Leu Gln Thr Leu Tyr Thr Ser  
 165 170 175  
 Leu Cys Thr Leu Val Gln Arg Val Gly Lys Ser Val Leu Val Gly Asn  
 180 185 190  
 Ile Asn Met Trp Val Tyr Arg Met Glu Thr Ile Leu His Trp Gln Gln  
 195 200 205  
 Gln Leu Asn Asn Ile Gln Ile Thr Arg Pro Ala Phe Lys Gly Leu Thr  
 210 215 220  
 Phe Thr Asp Leu Pro Leu Cys Leu Gln Leu Asn Ile Met Gln Arg Leu  
 225 230 235 240  
 Ser Asp Gly Arg Asp Leu Val Ser Leu Gly Gln Ala Ala Pro Asp Leu  
 245 250 255  
 His Val Leu Ser Glu Asp Arg Leu Leu Trp Lys Lys Leu Cys Gln Tyr  
 260 265 270  
 His Phe Ser Glu Arg Gln Ile Arg Lys Arg Leu Ile Leu Ser Asp Lys  
 275 280 285  
 Gly Gln Leu Asp Trp Lys Lys Met Tyr Phe Lys Leu Val Arg Cys Tyr  
 290 295 300  
 Pro Arg Lys Glu Gln Tyr Gly Asp Thr Leu Gln Leu Cys Lys His Cys  
 305 310 315 320  
 His Ile Leu Ser Trp Lys Gly Thr Asp His Pro Cys Thr Ala Asn Asn  
 325 330 335  
 Pro Glu Ser Cys Ser Val Ser Leu Ser Pro Gln Asp Phe Ile Asn Leu  
 340 345 350  
 Phe Lys Phe  
 355

<210> 36

<211> 351

<212> PRT

<213> rat

<400> 36

Met Asp Tyr Lys Ser Gly Leu Ile Pro Asp Gly Asn Ala Met Glu Asn  
 1 5 10 15  
 Leu Glu Lys Gln Leu Ile Cys Pro Ile Cys Leu Glu Met Phe Thr Lys  
 20 25 30  
 Pro Val Val Ile Leu Pro Cys Gln His Asn Leu Cys Arg Lys Cys Ala  
 35 40 45

Asn Asp Ile Phe Gln Ala Ala Asn Pro Tyr Trp Thr Asn Arg Gly Gly  
 50 55 60  
 Ser Val Ser Met Ser Gly Gly Arg Phe Arg Cys Pro Ser Cys Arg His  
 65 70 75 80  
 Glu Val Ile Met Asp Arg His Gly Val Tyr Gly Leu Gln Arg Asn Leu  
 85 90 95  
 Leu Val Glu Asn Ile Ile Asp Ile Tyr Lys Gln Glu Cys Ser Ser Arg  
 100 105 110  
 Pro Leu Gln Lys Gly Ser His Pro Met Cys Lys Glu His Glu Asp Glu  
 115 120 125  
 Lys Ile Asn Ile Tyr Cys Leu Thr Cys Glu Val Pro Thr Cys Ser Leu  
 130 135 140  
 Cys Lys Val Phe Gly Ala His Gln Ala Cys Glu Val Ala Pro Leu Gln  
 145 150 155 160  
 Ser Ile Phe Gln Gly Gln Lys Thr Glu Leu Ser Asn Cys Ile Ser Met  
 165 170 175  
 Leu Val Ala Gly Asn Asp Arg Val Gln Thr Ile Ile Ser Gln Leu Glu  
 180 185 190  
 Asp Ser Cys Arg Val Thr Lys Glu Asn Ser His Gln Val Lys Glu Glu  
 195 200 205  
 Leu Ser His Lys Phe Asp Ala Leu Tyr Ala Ile Leu Asp Glu Lys Lys  
 210 215 220  
 Ser Glu Leu Leu Gln Arg Ile Thr Gln Glu Gln Glu Lys Leu Asp  
 225 230 235 240  
 Phe Ile Glu Ala Leu Ile Leu Gln Tyr Arg Glu Gln Leu Glu Lys Ser  
 245 250 255  
 Thr Lys Leu Val Glu Thr Ala Ile Gln Ser Leu Asp Glu Pro Gly Gly  
 260 265 270  
 Ala Thr Phe Leu Leu Ser Ala Lys Pro Leu Ile Lys Ser Ile Val Glu  
 275 280 285  
 Ala Ser Lys Gly Cys Gln Leu Gly Lys Thr Glu Gln Gly Phe Glu Asn  
 290 295 300  
 Met Asp Tyr Phe Thr Leu Asn Leu Glu His Ile Ala Glu Ala Leu Arg  
 305 310 315 320  
 Ala Ile Asp Phe Gly Thr Asp Glu Glu Glu Glu Phe Thr Glu Glu Glu  
 325 330 335  
 Glu Glu Glu Asp Gln Glu Glu Gly Val Ser Thr Glu Gly His Gln  
 340 345 350

<210> 37

<211> 396

<212> PRT

<213> Homo sapiens

<400> 37

Met Asn Phe Thr Val Gly Phe Lys Pro Leu Leu Gly Asp Ala His Ser  
1 5 10 15

Met Asp Asn Leu Glu Lys Gln Leu Ile Cys Pro Ile Cys Leu Glu Met  
20 25 30

Phe Ser Lys Pro Val Val Leu Leu Pro Cys Gln His Asn Leu Cys Arg  
35 40 45

Lys Cys Ala Asn Asp Val Phe Gln Ala Ser Asn Pro Leu Trp Gln Ser  
50 55 60

Arg Gly Ser Thr Thr Val Ser Ser Gly Gly Arg Phe Arg Cys Pro Ser  
65 70 75 80

Cys Arg His Glu Val Val Leu Asp Arg His Gly Val Tyr Gly Leu Gln  
85 90 95

Arg Asn Leu Leu Val Glu Asn Ile Ile Asp Ile Tyr Lys Gln Glu Ser  
100 105 110

Ser Arg Pro Leu His Ser Lys Ala Glu Gln His Leu Met Cys Glu Glu  
115 120 125

His Glu Glu Glu Lys Ile Asn Ile Tyr Cys Leu Ser Cys Glu Val Pro  
130 135 140

Thr Cys Ser Leu Cys Lys Val Phe Gly Ala His Lys Asp Cys Glu Val  
145 150 155 160

Ala Pro Leu Pro Thr Ile Tyr Lys Arg Gln Lys Lys Gln Asp Leu Thr  
165 170 175

Leu Leu Pro Arg Leu Glu Cys Ser Gly Thr Asn Thr Thr Tyr Cys Ser  
180 185 190

Leu Asp Leu Pro Ser Ser Ser Asp Pro Pro Ile Leu Ala Ser Gln Asn  
195 200 205

Thr Lys Ile Ile Asp Ser Glu Leu Ser Asp Gly Ile Ala Met Leu Val  
210 215 220

Ala Gly Asn Asp Arg Val Gln Ala Val Ile Thr Gln Met Glu Glu Val  
225 230 235 240

Cys Gln Thr Ile Glu Asp Asn Ser Arg Arg Gln Lys Gln Leu Leu Thr  
245 250 255

Gln Arg Phe Glu Ser Leu Cys Ala Val Leu Glu Glu Arg Lys Gly Glu  
260 265 270

Leu Leu Gln Ala Leu Ala Arg Glu Gln Glu Glu Lys Leu Gln Arg Val  
275 280 285

Arg Gly Leu Ile Arg Gln Tyr Gly Asp His Leu Glu Ala Ser Ser Lys  
 290 295 300  
 Leu Val Glu Ser Ala Ile Gln Ser Met Glu Glu Pro Gln Met Ala Leu  
 305 310 315 320  
 Tyr Leu Gln Gln Ala Lys Glu Leu Ile Asn Lys Val Gly Ala Met Ser  
 325 330 335  
 Lys Val Glu Leu Ala Gly Arg Pro Glu Pro Gly Tyr Glu Ser Met Glu  
 340 345 350  
 Gln Phe Thr Val Arg Val Glu His Val Ala Glu Met Leu Arg Thr Ile  
 355 360 365  
 Asp Phe Gln Pro Gly Ala Ser Gly Glu Glu Glu Val Ala Pro Asp Gly  
 370 375 380  
 Glu Glu Gly Ser Ala Gly Pro Glu Glu Glu Arg Pro  
 385 390 395

<210> 38

<211> 867

<212> DNA

<213> Homo sapiens

<400> 38

atgaacttca cagtgggttt caagccgctg ctaggggatg cacacagcat ggacaacctg	60
gagaagcagc tcatctgccc catctgcctg gagatgttct ccaaaccagt ggtgatcctg	120
ccctgccaac acaacctgtg ccgcaaagt gccaacgacg tcttccaggc ctggaatcct	180
ctatggcagt cccggggctc caccactgtg tcttcaggag gccgtttccg ctgccccatcg	240
tgcaggcatg aggttgtcct ggacagacac ggtgtctacg gcctgcagcg aaacctgcta	300
gtggagaaca ttatcgacat ttacaagcag gagtcatcca ggccgctgca ctccaaggct	360
gagcagcacc tcatgtgcga ggagcatgaa gaagagaaga tcaatattta ctgcctgagc	420
tgtgaggtgc ccacctgctc tctctgcaag gtcttcggtg ccacaagga ctgtgaggtg	480
gccccactgc ccaccattta caaacgccag aagagtgagc tcagcgatgg catcgcgatg	540
ctggtggcag gcaatgaccg cgtgcaagca gtgatcacac agatggagga ggtgtgccag	600
actatcgagg acaatagccg gaggcagaag cagttgttaa accagaggtt tgagagcctg	660
tgcgcagtgc tggaggagcg caagggtgag ctgctgcagg cgctggcccg ggagcaagag	720
gagaagctgc agcggtccg cggcctcatc cgtcagtatg gcgaccacct ggaggcctcc	780
tctaagctgg tggagtctgc catccagtcc atggaagagc cacaaatggc gctgtatctc	840

cagcaggcca aggagctgat caataag

867

<210> 39

<211> 289

<212> PRT

<213> Homo sapiens

<400> 39

Met Asn Phe Thr Val Gly Phe Lys Pro Leu Leu Gly Asp Ala His Ser  
1 5 10 15

Met Asp Asn Leu Glu Lys Gln Leu Ile Cys Pro Ile Cys Leu Glu Met  
20 25 30

Phe Ser Lys Pro Val Val Ile Leu Pro Cys Gln His Asn Leu Cys Arg  
35 40 45

Lys Cys Ala Asn Asp Val Phe Gln Ala Ser Asn Pro Leu Trp Gln Ser  
50 55 60

Arg Gly Ser Thr Thr Val Ser Ser Gly Gly Arg Phe Arg Cys Pro Ser  
65 70 75 80

Cys Arg His Glu Val Val Leu Asp Arg His Gly Val Tyr Gly Leu Gln  
85 90 95

Arg Asn Leu Leu Val Glu Asn Ile Ile Asp Ile Tyr Lys Gln Glu Ser  
100 105 110

Ser Arg Pro Leu His Ser Lys Ala Glu Gln His Leu Met Cys Glu Glu  
115 120 125

His Glu Glu Glu Lys Ile Asn Ile Tyr Cys Leu Ser Cys Glu Val Pro  
130 135 140

Thr Cys Ser Leu Cys Lys Val Phe Gly Ala His Lys Asp Cys Glu Val  
145 150 155 160

Ala Pro Leu Pro Thr Ile Tyr Lys Arg Gln Lys Ser Glu Leu Ser Asp  
165 170 175

Gly Ile Ala Met Leu Val Ala Gly Asn Asp Arg Val Gln Ala Val Ile  
180 185 190

Thr Gln Met Glu Glu Val Cys Gln Thr Ile Glu Asp Asn Ser Arg Arg  
195 200 205

Gln Lys Gln Leu Leu Asn Gln Arg Phe Glu Ser Leu Cys Ala Val Leu  
210 215 220

Glu Glu Arg Lys Gly Glu Leu Leu Gln Ala Leu Ala Arg Glu Gln Glu  
225 230 235 240

Glu Lys Leu Gln Arg Val Arg Gly Leu Ile Arg Gln Tyr Gly Asp His  
 245 250 255

Leu Glu Ala Ser Ser Lys Leu Val Glu Ser Ala Ile Gln Ser Met Glu  
 260 265 270

Glu Pro Gln Met Ala Leu Tyr Leu Gln Gln Ala Lys Glu Leu Ile Asn  
 275 280 285

Lys

<210> 40

<211> 350

<212> PRT

<213> rat

<400> 40

Met Pro Phe Leu Gly Gln Asp Trp Arg Ser Pro Gly Gln Ser Trp Val  
 1 5 10 15

Lys Thr Ala Asp Gly Trp Lys Arg Phe Leu Asp Glu Lys Ser Gly Thr  
 20 25 30

Phe Val Ser Asp Leu Ser Ser Tyr Cys Asn Lys Glu Asn Leu Phe Asn  
 35 40 45

Ser Leu Asn Tyr Asp Tyr Ala Ala Lys Lys Arg Lys Lys Asp Ile Gln  
 50 55 60

Asn Ser Lys Thr Lys Thr Gln Tyr Phe His Gln Glu Lys Trp Ile Tyr  
 65 70 75 80

Val Lys Lys Gly Ser Thr Lys Glu Arg His Gly Tyr Cys Thr Leu Gly  
 85 90 95

Glu Ala Phe Asn Arg Leu Asp Phe Ser Thr Ala Ile Leu Asp Ser Arg  
 100 105 110

Arg Thr Asn Tyr Val Val Arg Leu Leu Glu Leu Ile Ala Lys Ser Gln  
 115 120 125

Leu Thr Ser Leu Ser Gly Ile Ala Gln Lys Asn Phe Met Asn Ile Leu  
 130 135 140

Glu Lys Val Val Leu Lys Val Leu Glu Asp Gln Gln Asn Ile Arg Leu  
 145 150 155 160

Thr Arg Glu Leu Leu Gln Thr Leu Tyr Thr Ser Leu Cys Thr Leu Val  
 165 170 175

Gln Arg Val Gly Lys Ser Val Leu Val Gly Asn Thr Asn Met Trp Val  
 180 185 190

Tyr Arg Met Glu Thr Thr Leu His Trp Gln Gln Gln Leu Asn Ser Ile  
 195 200 205  
 Gln Ile Ser Arg Pro Ala Phe Lys Gly Leu Thr Ile Thr Asp Leu Pro  
 210 215 220  
 Val Cys Leu Gln Leu Asn Ile Met Gln Arg Leu Ser Asp Gly Arg Asp  
 225 230 235 240  
 Leu Val Ser Leu Gly Gln Ala Ala Pro Asp Leu His Val Leu Ser Glu  
 245 250 255  
 Asp Arg Leu Leu Trp Lys Arg Leu Cys Gln Tyr His Phe Ser Glu Arg  
 260 265 270  
 Gln Ile Arg Lys Arg Leu Ile Leu Ser Asp Lys Gly Gln Leu Asp Trp  
 275 280 285  
 Lys Lys Met Tyr Phe Lys Leu Val Arg Cys Tyr Pro Arg Arg Glu Gln  
 290 295 300  
 Tyr Gly Val Thr Leu Gln Leu Cys Lys His Cys His Ile Leu Ser Trp  
 305 310 315 320  
 Lys Gly Thr Asp His Pro Cys Thr Ala Asn Asn Pro Glu Ser Cys Ser  
 325 330 335  
 Val Ser Leu Ser Pro Gln Asp Phe Ile Asn Leu Phe Lys Phe  
 340 345 350

<210> 41

<211> 355

<212> PRT

<213> Homo sapiens

<400> 41

Met Pro Phe Leu Gly Gln Asp Trp Arg Ser Pro Gly Gln Asn Trp Val  
 1 5 10 15  
 Lys Thr Ala Asp Gly Trp Lys Arg Phe Leu Asp Glu Lys Ser Gly Ser  
 20 25 30  
 Phe Val Ser Asp Leu Ser Ser Tyr Cys Asn Lys Glu Val Tyr Asn Lys  
 35 40 45  
 Glu Asn Leu Phe Asn Ser Leu Asn Tyr Asp Tyr Ala Ala Lys Lys Arg  
 50 55 60  
 Lys Lys Asp Met Leu Asn Ser Lys Thr Lys Thr Gln Tyr Phe His Gln  
 65 70 75 80  
 Glu Lys Trp Ile Tyr Val His Lys Gly Ser Thr Lys Glu Arg His Gly  
 85 90 95

Tyr Cys Thr Leu Gly Glu Ala Phe Asn Arg Leu Asp Phe Ser Thr Ala  
 100 105 110  
 Ile Leu Asp Ser Arg Arg Thr Asn Tyr Val Val Arg Leu Leu Glu Leu  
 115 120 125  
 Ile Ala Lys Ser Gln Leu Thr Ser Leu Ser Gly Ile Ala Gln Lys Asn  
 130 135 140  
 Phe Met Asn Ile Leu Glu Lys Val Val Leu Lys Val Leu Glu Asp Gln  
 145 150 155 160  
 Gln Asn Ile Arg Leu Thr Arg Glu Leu Leu Gln Thr Leu Tyr Thr Ser  
 165 170 175  
 Leu Cys Thr Leu Val Gln Arg Val Gly Lys Ser Val Leu Val Gly Asn  
 180 185 190  
 Thr Asn Met Trp Val Tyr Arg Met Glu Thr Thr Leu His Trp Gln Gln  
 195 200 205  
 Gln Leu Asn Asn Ile Gln Ile Thr Arg Pro Ala Phe Lys Gly Leu Thr  
 210 215 220  
 Phe Thr Asp Leu Pro Leu Cys Leu Gln Leu Asn Ile Met Gln Arg Leu  
 225 230 235 240  
 Ser Asp Gly Arg Asp Leu Val Ser Leu Gly Gln Ala Ala Pro Asp Leu  
 245 250 255  
 His Val Leu Ser Glu Asp Arg Leu Leu Trp Lys Lys Leu Cys Gln Tyr  
 260 265 270  
 His Phe Ser Glu Arg Gln Ile Arg Lys Arg Leu Ile Leu Ser Asp Lys  
 275 280 285  
 Gly Gln Leu Asp Trp Lys Lys Met Tyr Phe Lys Leu Val Arg Cys Tyr  
 290 295 300  
 Pro Arg Lys Glu Gln Tyr Gly Asp Thr Leu Gln Leu Cys Lys His Cys  
 305 310 315 320  
 His Ile Leu Ser Trp Lys Gly Thr Asp His Pro Cys Thr Ala Asn Asn  
 325 330 335  
 Pro Glu Ser Cys Ser Val Ser Leu Ser Pro Gln Asp Phe Ile Asn Leu  
 340 345 350

Phe Lys Phe  
355

<210> 42

<211> 271

<212> PRT

<213> Homo sapiens



<400> 42

Leu Ile Leu Thr Ser Val Leu Leu Phe Gln Arg His Gly Tyr Cys Thr  
1 5 10 15

Leu Gly Glu Ala Phe Asn Arg Leu Asp Phe Ser Ser Ala Ile Gln Asp  
20 25 30

Ile Arg Thr Glu Asn Tyr Val Val Lys Leu Leu Gln Leu Ile Ala Lys  
35 40 45

Ser Gln Leu Thr Ser Leu Ser Gly Val Ala Gln Lys Asn Tyr Phe Asn  
50 55 60

Ile Leu Asp Lys Ile Val Gln Lys Val Leu Asp Asp His His Asn Pro  
65 70 75 80

Arg Leu Thr Lys Asp Leu Leu Gln Asp Leu Ser Ser Thr Leu Cys Ile  
85 90 95

Leu Ile Arg Gly Val Gly Lys Ser Val Leu Val Gly Asn Ile Asn Ile  
100 105 110

Trp Ile Cys Arg Leu Glu Thr Ile Leu Ala Trp Gln Gln Gln Leu Gln  
115 120 125

Asp Leu Gln Met Thr Lys Gln Val Asn Asn Gly Leu Thr Leu Ser Asp  
130 135 140

Leu Pro Leu His Met Leu Asn Ile Leu Tyr Arg Phe Ser Asp Gly Trp  
145 150 155 160

Asp Ile Ile Thr Leu Gly Gln Val Thr Pro Thr Leu Tyr Met Leu Ser  
165 170 175

Glu Asp Arg Gln Leu Trp Lys Arg Leu Cys Gln Tyr His Phe Ala Glu  
180 185 190

Lys Gln Phe Cys Arg His Leu Ile Leu Ser Glu Lys Gly His Ile Glu  
195 200 205

Trp Lys Leu Met Tyr Phe Ala Leu Gln Lys His Tyr Pro Ala Lys Glu  
210 215 220

Gln Tyr Gly Asp Thr Leu His Phe Cys Arg His Cys Ser Thr Leu Phe  
225 230 235 240

Trp Lys Asp Ser Gly His Pro Cys Thr Ala Ala Asp Pro Asp Ser Cys  
245 250 255

Phe Thr Pro Val Ser Pro Gln His Phe Ile Asp Leu Phe Lys Phe  
260 265 270

<210> 43

<211> 350

<212> PRT

<213> rat

<400> 43

Met	Pro	Phe	Leu	Gly	Gln	Asp	Trp	Arg	Ser	Pro	Gly	Gln	Ser	Trp	Val	
1				5					10					15		
Lys	Thr	Ala	Asp	Gly	Trp	Lys	Arg	Phe	Leu	Asp	Glu	Lys	Ser	Gly	Thr	
			20					25					30			
Phe	Val	Ser	Asp	Leu	Ser	Ser	Tyr	Cys	Asn	Lys	Glu	Asn	Leu	Phe	Asn	
		35					40					45				
Ser	Leu	Asn	Tyr	Asp	Val	Ala	Ala	Lys	Lys	Arg	Lys	Lys	Asp	Ile	Gln	
	50					55					60					
Asn	Ser	Lys	Thr	Lys	Thr	Gln	Tyr	Phe	His	Gln	Glu	Lys	Trp	Ile	Tyr	
65					70					75					80	
Val	His	Lys	Gly	Ser	Thr	Lys	Glu	Arg	His	Gly	Tyr	Cys	Thr	Leu	Gly	
				85					90					95		
Glu	Ala	Phe	Asn	Arg	Leu	Asp	Phe	Ser	Thr	Ala	Ile	Leu	Asp	Ser	Arg	
			100					105					110			
Arg	Phe	Asn	Tyr	Val	Val	Arg	Leu	Leu	Glu	Leu	Ile	Ala	Lys	Ser	Gln	
		115					120					125				
Leu	Thr	Ser	Leu	Ser	Gly	Ile	Ala	Gln	Lys	Asn	Phe	Met	Asn	Ile	Leu	
	130					135					140					
Glu	Lys	Val	Val	Leu	Lys	Val	Leu	Glu	Asp	Gln	Gln	Asn	Ile	Arg	Leu	
145					150					155					160	
Ile	Arg	Glu	Leu	Leu	Gln	Thr	Leu	Tyr	Thr	Ser	Leu	Cys	Thr	Leu	Val	
				165					170					175		
Gln	Arg	Val	Gly	Lys	Ser	Val	Leu	Val	Gly	Asn	Ile	Asn	Met	Trp	Val	
		180						185					190			
Tyr	Arg	Met	Glu	Thr	Thr	Leu	His	Trp	Gln	Gln	Gln	Leu	Asn	Ser	Ile	
		195					200					205				
Gln	Ile	Ser	Arg	Pro	Ala	Phe	Lys	Gly	Leu	Thr	Ile	Thr	Asp	Leu	Pro	
	210					215					220					
Val	Cys	Leu	Gln	Leu	Asn	Ile	Met	Gln	Arg	Leu	Ser	Asp	Gly	Arg	Asp	
225					230					235					240	
Leu	Val	Ser	Leu	Gly	Gln	Ala	Ala	Pro	Asp	Leu	His	Val	Leu	Ser	Glu	
				245					250					255		
Asp	Arg	Leu	Leu	Trp	Lys	Arg	Leu	Cys	Gln	Tyr	His	Phe	Ser	Glu	Arg	
		260						265					270			
Gln	Ile	Arg	Lys	Arg	Leu	Ile	Leu	Ser	Asp	Lys	Gly	Gln	Leu	Asp	Trp	
	275					280						285				
Lys	Lys	Met	Tyr	Phe	Lys	Leu	Val	Arg	Cys	Tyr	Pro	Arg	Arg	Glu	Gln	
	290					295					300					

Tyr Gly Val Thr Leu Gln Leu Cys Lys His Cys His Ile Leu Ser Trp  
 305 310 315 320

Lys Gly Thr Asp His Pro Cys Thr Ala Asn Asn Pro Glu Ser Cys Ser  
 325 330 335

Val Ser Leu Ser Pro Gln Asp Phe Ile Asn Leu Phe Lys Phe  
 340 345 350

<210> 44

<211> 350

<212> PRT

<213> rat

<400> 44

Met Pro Phe Leu Gly Gln Asp Trp Arg Ser Pro Gly Gln Ser Trp Val  
 1 5 10 15

Lys Thr Ala Asp Gly Trp Lys Arg Phe Leu Asp Glu Lys Ser Gly Leu  
 20 25 30

Leu Val Ser Asp Leu Ser Ser Tyr Cys Asn Lys Glu Asn Leu Phe Asn  
 35 40 45

Ser Leu Asn Tyr Asp Val Ala Ala Lys Lys Arg Lys Lys Asp Ile Gln  
 50 55 60

Asn Ser Lys Thr Lys Thr Gln Tyr Phe His Gln Glu Lys Trp Ile Tyr  
 65 70 75 80

Val His Lys Gly Ser Thr Lys Glu Arg His Gly Tyr Cys Thr Leu Gly  
 85 90 95

Glu Ala Leu Asn Arg Leu Asp Phe Ser Thr Ala Ile Leu Asp Ser Arg  
 100 105 110

Arg Phe Asn Tyr Val Val Arg Leu Leu Glu Leu Ile Ala Lys Ser Gln  
 115 120 125

Leu Thr Ser Leu Ser Gly Ile Ala Gln Lys Asn Phe Met Asn Ile Leu  
 130 135 140

Glu Lys Val Val Leu Lys Val Leu Glu Asp Gln Gln Asn Ile Arg Leu  
 145 150 155 160

Ile Arg Glu Leu Leu Gln Thr Leu Tyr Thr Ser Leu Cys Thr Leu Val  
 165 170 175

Gln Arg Val Gly Lys Ser Val Leu Val Gly Asn Ile Asn Met Trp Val  
 180 185 190

Tyr Arg Met Glu Thr Thr Leu His Trp Gln Gln Gln Leu Asn Ser Ile  
 195 200 205

Gln Ile Ser Arg Pro Ala Phe Lys Gly Leu Thr Ile Thr Asp Leu Pro  
 210 215 220  
 Val Cys Leu Gln Leu Asn Ile Met Gln Arg Leu Ser Asp Gly Arg Asp  
 225 230 235 240  
 Leu Val Ser Leu Gly Gln Ala Ala Pro Asp Leu His Val Leu Ser Glu  
 245 250 255  
 Asp Arg Leu Leu Trp Lys Arg Leu Cys Gln Tyr His Phe Ser Glu Arg  
 260 265 270  
 Gln Ile Arg Lys Arg Leu Ile Leu Ser Asp Lys Gly Gln Leu Asp Trp  
 275 280 285  
 Lys Lys Met Tyr Phe Lys Leu Val Arg Cys Tyr Pro Arg Arg Glu Gln  
 290 295 300  
 Tyr Gly Val Thr Leu Gln Leu Cys Lys His Cys His Ile Leu Ser Trp  
 305 310 315 320  
 Lys Gly Thr Asp His Pro Cys Thr Ala Asn Asn Pro Glu Ser Cys Ser  
 325 330 335  
 Val Ser Leu Ser Pro Gln Asp Phe Ile Asn Leu Phe Lys Phe  
 340 345 350

<210> 45

<211> 351

<212> PRT

<213> rat

<400> 45

Met Asp Tyr Lys Ser Gly Leu Ile Pro Asp Gly Asn Ala Met Glu Asn  
 1 5 10 15  
 Leu Glu Lys Gln Leu Ile Cys Pro Ile Cys Leu Glu Met Phe Thr Lys  
 20 25 30  
 Pro Val Val Ile Leu Pro Cys Gln His Asn Leu Cys Arg Lys Cys Ala  
 35 40 45  
 Asn Asp Ile Phe Gln Ala Ala Asn Pro Tyr Trp Thr Asn Arg Gly Gly  
 50 55 60  
 Ser Val Ser Met Ser Gly Gly Arg Phe Arg Cys Pro Ser Cys Arg His  
 65 70 75 80  
 Glu Val Ile Met Asp Arg His Gly Val Tyr Gly Leu Gln Arg Asn Leu  
 85 90 95  
 Leu Val Glu Asn Ile Ile Asp Ile Tyr Lys Gln Glu Cys Ser Ser Arg  
 100 105 110

Pro Leu Gln Lys Gly Ser His Pro Met Cys Lys Glu His Glu Asp Glu  
 115 120 125  
 Lys Ile Asn Ile Tyr Cys Leu Thr Cys Glu Val Pro Thr Cys Ser Leu  
 130 135 140  
 Cys Lys Val Phe Gly Ala His Gln Ala Cys Glu Val Ala Pro Leu Gln  
 145 150 155 160  
 Ser Ile Phe Gln Gly Gln Lys Thr Glu Leu Ser Asn Cys Ile Ser Met  
 165 170 175  
 Leu Val Ala Gly Asn Asp Arg Val Gln Thr Ile Ile Ser Gln Leu Glu  
 180 185 190  
 Asp Ser Cys Arg Val Thr Lys Glu Asn Ser His Gln Val Lys Glu Glu  
 195 200 205  
 Leu Ser His Lys Phe Asp Ala Leu Tyr Ala Ile Leu Asp Glu Lys Lys  
 210 215 220  
 Ser Glu Leu Leu Gln Arg Ile Thr Gln Glu Gln Glu Lys Leu Asp  
 225 230 235 240  
 Phe Ile Glu Ala Leu Ile Leu Gln Tyr Arg Glu Gln Leu Glu Lys Ser  
 245 250 255  
 Thr Lys Leu Val Glu Thr Ala Ile Gln Ser Leu Asp Glu Pro Gly Gly  
 260 265 270  
 Ala Thr Phe Leu Leu Ser Ala Lys Pro Leu Ile Lys Ser Ile Val Glu  
 275 280 285  
 Ala Ser Lys Gly Cys Gln Leu Gly Lys Thr Glu Gln Gly Phe Glu Asn  
 290 295 300  
 Met Asp Tyr Phe Thr Leu Asn Leu Glu His Ile Ala Glu Ala Leu Arg  
 305 310 315 320  
 Ala Ile Asp Phe Gly Thr Asp Glu Glu Glu Glu Phe Thr Glu Glu Glu  
 325 330 335  
 Glu Glu Glu Asp Gln Glu Glu Gly Val Ser Thr Glu Gly His Gln  
 340 345 350

<210> 46

<211> 351

<212> PRT

<213> rat

<400> 46

Met Asp Tyr Lys Ser Gly Leu Ile Pro Asp Gly Asn Ala Met Glu Asn  
 1 5 10 15

Leu Glu Lys Gln Leu Ile Cys Pro Ile Cys Leu Glu Met Phe Thr Lys  
 20 25 30  
 Pro Val Val Ile Leu Pro Cys Gln His Asn Leu Cys Arg Lys Cys Ala  
 35 40 45  
 Asn Asp Ile Phe Gln Ala Ala Asn Pro Tyr Trp Thr Asn Arg Gly Gly  
 50 55 60  
 Ser Val Ser Met Ser Gly Gly Arg Phe Arg Cys Pro Ser Cys Arg His  
 65 70 75 80  
 Glu Val Ile Met Asp Arg His Gly Val Tyr Gly Leu Gln Arg Asn Leu  
 85 90 95  
 Leu Val Glu Asn Ile Ile Asp Ile Tyr Lys Gln Glu Cys Ser Ser Arg  
 100 105 110  
 Pro Leu Gln Lys Gly Ser His Pro Met Cys Lys Glu His Glu Asp Glu  
 115 120 125  
 Lys Ile Asn Ile Tyr Cys Leu Thr Cys Glu Val Pro Thr Cys Ser Leu  
 130 135 140  
 Cys Lys Val Phe Gly Ala His Gln Ala Cys Glu Val Ala Pro Leu Gln  
 145 150 155 160  
 Ser Ile Phe Gln Gly Gln Lys Thr Glu Leu Ser Asn Cys Ile Ser Met  
 165 170 175  
 Leu Val Ala Gly Asn Asp Arg Val Gln Thr Ile Ile Ser Gln Leu Glu  
 180 185 190  
 Asp Ser Cys Arg Val Thr Lys Glu Asn Ser His Gln Val Lys Glu Glu  
 195 200 205  
 Leu Ser His Lys Phe Asp Ala Leu Tyr Ala Ile Leu Asp Glu Lys Lys  
 210 215 220  
 Ser Glu Leu Leu Gln Arg Ile Thr Gln Glu Gln Glu Glu Lys Leu Asp  
 225 230 235 240  
 Phe Ile Glu Ala Leu Ile Leu Gln Tyr Arg Glu Gln Leu Glu Lys Ser  
 245 250 255  
 Thr Lys Leu Val Glu Thr Ala Ile Gln Ser Leu Asp Glu Pro Gly Gly  
 260 265 270  
 Ala Thr Phe Leu Leu Ser Ala Lys Pro Leu Ile Lys Ser Ile Val Glu  
 275 280 285  
 Ala Ser Lys Gly Cys Gln Leu Gly Lys Thr Glu Gln Gly Phe Glu Asn  
 290 295 300  
 Met Asp Tyr Phe Thr Leu Asn Leu Glu His Ile Ala Glu Ala Leu Arg  
 305 310 315 320  
 Ala Ile Asp Phe Gly Thr Asp Glu Glu Glu Glu Phe Thr Glu Glu Glu  
 325 330 335

Glu Glu Glu Asp Gln Glu Glu Gly Val Ser Thr Glu Gly His Gln  
 340 345 350

<210> 47

<211> 351

<212> PRT

<213> rat

<400> 47

Met Asp Tyr Lys Ser Gly Leu Ile Pro Asp Gly Asn Ala Met Glu Asn  
 1 5 10 15

Leu Glu Lys Gln Leu Ile Cys Pro Ile Cys Leu Glu Met Phe Thr Lys  
 20 25 30

Pro Val Val Ile Leu Pro Cys Gln His Asn Leu Cys Arg Lys Cys Ala  
 35 40 45

Asn Asp Ile Phe Gln Ala Ala Asn Pro Tyr Trp Thr Asn Arg Gly Gly  
 50 55 60

Ser Val Ser Met Ser Gly Gly Arg Phe Arg Cys Pro Ser Cys Arg His  
 65 70 75 80

Glu Val Ile Met Asp Arg His Gly Val Tyr Gly Leu Gln Arg Asn Leu  
 85 90 95

Leu Val Glu Asn Ile Ile Asp Ile Tyr Lys Gln Glu Cys Ser Ser Arg  
 100 105 110

Pro Leu Gln Lys Gly Ser His Pro Met Cys Lys Glu His Glu Asp Glu  
 115 120 125

Lys Ile Asn Ile Tyr Cys Leu Thr Cys Glu Val Pro Thr Cys Ser Leu  
 130 135 140

Cys Lys Val Phe Gly Ala His Gln Ala Cys Glu Val Ala Pro Leu Gln  
 145 150 155 160

Ser Ile Phe Gln Gly Gln Lys Thr Glu Leu Ser Asn Cys Ile Ser Met  
 165 170 175

Leu Val Ala Gly Asn Asp Arg Val Gln Thr Ile Ile Ser Gln Leu Glu  
 180 185 190

Asp Ser Cys Arg Val Thr Lys Glu Asn Ser His Gln Val Lys Glu Glu  
 195 200 205

Leu Ser His Lys Phe Asp Ala Leu Tyr Ala Ile Leu Asp Glu Lys Lys  
 210 215 220

Ser Glu Leu Leu Gln Arg Ile Thr Gln Glu Gln Glu Glu Lys Leu Asp  
 225 230 235 240

Phe Ile Glu Ala Leu Ile Leu Gln Tyr Arg Glu Gln Leu Glu Lys Ser  
 245 250 255  
 Thr Lys Leu Val Glu Thr Ala Ile Gln Ser Leu Asp Glu Pro Gly Gly  
 260 265 270  
 Ala Thr Phe Leu Leu Ser Ala Lys Pro Leu Ile Lys Ser Ile Val Glu  
 275 280 285  
 Ala Ser Lys Gly Cys Gln Leu Gly Lys Thr Glu Gln Gly Phe Glu Asn  
 290 295 300  
 Met Asp Tyr Phe Thr Leu Asn Leu Glu His Ile Ala Glu Ala Leu Arg  
 305 310 315 320  
 Ala Ile Asp Phe Gly Thr Asp Glu Glu Glu Glu Phe Thr Glu Glu Glu  
 325 330 335  
 Glu Glu Glu Asp Gln Glu Glu Gly Val Ser Thr Glu Gly His Gln  
 340 345 350  
 <210> 48  
 <211> 353  
 <212> PRT  
 <213> Homo sapiens  
 <400> 48  
 Met, Asp Tyr Lys Ser Ser Leu Ile Gln Asp Gly Asn Pro Met Glu Asn  
 1 5 10 15  
 Leu Glu Lys Gln Leu Ile Cys Pro Ile Cys Leu Glu Met Phe Thr Lys  
 20 25 30  
 Pro Val Val Ile Leu Pro Cys Gln His Asn Leu Cys Arg Lys Cys Ala  
 35 40 45  
 Asn Asp Ile Phe Gln Ala Ala Asn Pro Tyr Trp Thr Ser Arg Gly Ser  
 50 55 60  
 Ser Val Ser Met Ser Gly Gly Arg Phe Arg Cys Pro Thr Cys Arg His  
 65 70 75 80  
 Glu Val Ile Met Asp Arg His Gly Val Tyr Gly Leu Gln Arg Asn Leu  
 85 90 95  
 Leu Val Glu Asn Ile Ile Asp Ile Tyr Lys Gln Glu Cys Ser Ser Arg  
 100 105 110  
 Pro Leu Gln Lys Gly Ser His Pro Met Cys Lys Glu His Glu Asp Glu  
 115 120 125  
 Lys Ile Asn Ile Tyr Cys Leu Thr Cys Glu Val Pro Thr Cys Ser Met  
 130 135 140



Cys Lys Val Phe Gly Ile His Lys Ala Cys Glu Val Ala Pro Leu Gln  
 145 150 155 160  
 Ser Val Phe Gln Gly Gln Lys Thr Glu Leu Asn Asn Cys Ile Ser Met  
 165 170 175  
 Leu Val Ala Gly Asn Asp Arg Val Gln Thr Ile Tyr Thr Gln Leu Glu  
 180 185 190  
 Asp Ser Arg Arg Val Thr Lys Glu Asn Ser His Gln Val Lys Glu Glu  
 195 200 205  
 Leu Ser Gln Lys Phe Asp Thr Leu Tyr Ala Ile Leu Asp Glu Lys Lys  
 210 215 220  
 Ser Glu Leu Leu Gln Arg Ile Thr Gln Glu Gln Glu Glu Lys Leu Ser  
 225 230 235 240  
 Phe Ile Glu Ala Leu Ile Gln Gln Tyr Gln Glu Gln Leu Asp Lys Ser  
 245 250 255  
 Thr Lys Leu Val Glu Thr Ala Ile Gln Ser Leu Asp Glu Pro Gly Gly  
 260 265 270  
 Ala Thr Phe Leu Leu Thr Ala Lys Gln Leu Ile Lys Ser Ile Val Glu  
 275 280 285  
 Ala Ser Lys Gly Cys Gln Leu Gly Lys Thr Glu Gln Gly Phe Glu Asn  
 290 295 300  
 Met Asp Phe Phe Thr Leu Asp Leu Glu His Ile Ala Asp Ala Leu Arg  
 305 310 315 320  
 Ala Ile Asp Phe Gly Thr Asp Glu Glu Glu Glu Glu Phe Ile Glu Glu  
 325 330 335  
 Glu Asp Gln Glu Glu Glu Glu Ser Thr Glu Gly Lys Glu Glu Gly His  
 340 345 350  
 Gln